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(FILE 'HOME' ENTERED AT 16:36:33 ON 20 JUN 2003)

FILE 'USPATFULL' ENTERED AT 16:38:55 ON 20 JUN 2003
L1 69 S ((PROTEIN OR PEPTIDE) (3W) DATABASE)/CLM,TI
L2 2 S ((PROTEIN OR PEPTIDE) (3W) DATABASE)/TI
L3 67 S L1 NOT L2
L4 1 S L3 AND (DATA MINING)/CLM
L5 155 S (DATABASE AND (DATA MINING))/CLM
L6 11 S L5 AND PROTEIN

=> d bib,kwic 7,8,10

L6 ANSWER 7 OF 11 USPATFULL
AN 2002:266625 USPATFULL
TI System and method for management of microarray and laboratory information
IN Bernhart, Derek, San Jose, CA, UNITED STATES
Bartell, Daniel M., San Carlos, CA, UNITED STATES
Zewde, Wehib, Roseville, CA, UNITED STATES
Nijor, Rajindar S., Saratoga, CA, UNITED STATES
PA Affymetrix, Inc., Santa Clara, CA (U.S. corporation)
PI US 2002147512 A1 20021010
AI US 2002-683912 A1 20020301 (9)
PRAI US 2001-273231P 20010302 (60)
US 2000-220587P 20000725 (60)
DT Utility
FS APPLICATION
LREP AFFYMETRIX, INC, ATTN: CHIEF IP COUNSEL, LEGAL DEPT., 3380 CENTRAL EXPRESSWAY, SANTA CLARA, CA, 95051
CLMN Number of Claims: 42
ECL Exemplary Claim: 1
DRWN 6 Drawing Page(s)
LN.CNT 1085
DETD . . . The probes of synthesized probe arrays typically are used in conjunction with biological target molecules of interest, such as cells, **proteins**, genes or EST's, other DNA sequences, or other biological elements. More specifically, the biological molecule of interest may be a. . . if transcripts of genes are the interest of an experiment, the target molecules would be the transcripts. Other examples include **protein** fragments, small molecules, etc. Target nucleic acid refers to a nucleic acid (often derived from a biological sample) of interest.. . .
DETD . . . strands of short oligonucleotides in a water solution, or it may include a high concentration of long strands of complex **proteins**. The Affymetrix.TM. 417.TM. Arrayer and 427.TM. Arrayer are devices that deposit densely packed arrays of biological materials on microscope slides. . . .
CLM What is claimed is:
. . . claim 7, wherein: the one or more target molecules include any one or more of the following biological materials: cells; **proteins**; genes, EST's, or other DNA sequences; ligand; receptor; peptide; or nucleic acid.

. . . The interface of claim 11, wherein: the at least one data structure conforms, at least in part, to a publish **database** schema.

20. The interface of claim 19, wherein: the publish **database** schema includes all or part of the AADM schema.

22. The interface of claim 21, wherein: the laboratory information management system also includes a process **database** constructed and arranged to store identifiers of one or more locations where data of

the at least one data structure. . .
. . . software application to the at least one data structure based on the one or more locations stored in the process **database**.

. . . 25. The interface of claim 14, wherein: the user-provided software application includes any one or more of the following: a **data-mining** tool, an image-processing tool, or a data-processing tool.

L6 ANSWER 8 OF 11 USPATFULL
AN 2002:236801 USPATFULL
TI System, method, and user interfaces for mining of genomic data
IN Jevons, Luis, Sunnyvale, CA, UNITED STATES
Awad, Timothy A., San Francisco, CA, UNITED STATES
Sheppy, Conrad G., Redwood City, CA, UNITED STATES
Ellis, Nicole, Monte Serenone, CA, UNITED STATES
PA Affymetrix, Inc., Santa Clara, CA, UNITED STATES, 95051 (U.S. corporation)
PI US 2002129009 A1 20020912
AI US 2002-683980 A1 20020308 (9)
PRAI US 2001-274986P 20010312 (60)
US 2001-312256P 20010814 (60)
DT Utility
FS APPLICATION
LREP AFFYMETRIX, INC, ATTN: CHIEF IP COUNSEL, LEGAL DEPT., 3380 CENTRAL EXPRESSWAY, SANTA CLARA, CA, 95051
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 14 Drawing Page(s)
LN.CNT 1215
DETD . . . The probes of synthesized probe arrays typically are used in conjunction with biological target molecules of interest, such as cells, **proteins**, genes or EST's, other DNA sequences, or other biological elements. More specifically, the biological molecule of interest may be a. . . if transcripts of genes are the interest of an experiment, the target molecules would be the transcripts. Other examples include **protein** fragments, small molecules, etc. Target nucleic acid refers to a nucleic acid (often derived from a biological sample) of interest.. . .
DETD . . . strands of short oligonucleotides in a water solution, or it may include a high concentration of long strands of complex **proteins**. The Affymetrix.RTM. 417.TM. Arrayer and 427.TM. Arrayer are devices that deposit densely packed arrays of biological materials on microscope slides. . .
DETD [0035] Synthesized or spotted probe arrays typically are used in conjunction with tagged biological samples such as cells, **proteins**, genes or EST's, other DNA sequences, or other biological elements. These samples, referred to herein as targets, are processed so. . .
CLM What is claimed is:
1. A **data mining** tool, comprising: a data structure populator constructed and arranged to store one or more first sets of data selected for. . .
2. The **data mining** tool of claim 1, wherein: the data structure populator includes a pivot table populator and the first data structure is. . .
3. The **data mining** tool of claim 1, wherein: at least one of the one or more first sets of data is user-selected.

4. The **data mining** tool of claim 1, wherein: the one or more query parameters are, at least in part, user-selected.

5. The **data mining** tool of claim 1, further

comprising: a **database** registration processor constructed and arranged to provide the one or more first sets of data to the data structure populator based, at least in part, on a user selection of at least one **database**.

6. The **data mining** tool of claim 5, wherein: the at least one **database** is organized in accordance with a **database** schema integrated for both synthesized probe array data and spotted probe array data.
7. The **data mining** tool of claim 1, further comprising: a query parameter provider constructed and arranged to provide the one or more query. . .
8. The **data mining** tool of claim 7, wherein: the user selection of at least one of the one or more query parameters includes. . .
9. The **data mining** tool of claim 7, wherein: the user selection of at least one of the one or more query parameters includes. . .
10. The **data mining** tool of claim 1, further comprising: a results tables and graphs builder constructed and arranged to graphically display data returned. . .
11. The **data mining** tool of claim 10, wherein: the graphic display consists of one or more of the group selected from table, spreadsheet,. . .
12. The **data mining** tool of claim 1, wherein: the one or more first sets of data includes expression analysis data.

13. The **data mining** tool of claim 1, further comprising: a query parameter provider constructed and arranged to provide the one or more query. . .
14. The **data mining** tool of claim 13, wherein: the selection of at least one of the one or more query parameters further includes. . .
15. The **data mining** tool of claim 13, wherein: the selection of at least one of the one or more query parameters further includes. . .
16. A **data mining** tool, comprising: a first data structure including data provided from a first **database**; and a query manager constructed and arranged to interrogate the first data structure with a first query; wherein the first **database** is organized, at least in part, in accordance with a **database** schema integrated for synthesized probe array data and spotted probe array data.

17. A **data mining** method, comprising the steps of: storing first data into a first data structure provided from a first **database**; and interrogating the first data structure with a first query; wherein at least a portion of the first data are. . .
18. The method of claim 17, further comprising the step of: providing the first data from the first **database** based, at least in part, on a user selection of at least one **database**.

19. The method of claim 18, wherein: the at least one **database** is organized in accordance with an **database** schema integrated for both synthesized probe array data and spotted probe array data.

24. A computer program product for **data mining** comprising a computer usable medium storing control logic that, when executed on a computer system, performs a method comprising the. . .
25. A computer system, comprising: a processor; and a memory unit having stored therein a set of **data mining** instructions that, when executed by the processor, performs a method comprising the steps of: displaying a first frame in a. . .
27. A computer system, comprising: a processor; and a memory unit

having stored therein a set of **data mining** instructions that, when executed by the processor, performs a method comprising the steps of storing first data into a first data structure provided from a first **database** and interrogating the first data structure with a first query, wherein at least a portion of the first data are. . .

29. A computer system, comprising: a processor; and a memory unit having stored therein a set of **data mining** instructions that, when executed by the processor, performs a method comprising the steps of storing first data into a first data structure provided from a first **database** and interrogating the first data structure with a first query, wherein the first data include combinations of comparison analyses for. . .

L6 ANSWER 10 OF 11 USPATFULL
AN 1999:148165 USPATFULL
TI Method of data mining including determining multidimensional coordinates of each item using a predetermined scalar similarity value for each item pair
IN Meyers, Charles E., Albuquerque, NM, United States
Davidson, George S., Albuquerque, NM, United States
Johnson, David K., Albuquerque, NM, United States
Hendrickson, Bruce A., Albuquerque, NM, United States
Wylie, Brian N., Albuquerque, NM, United States
PA Sandia Corporation, Albuquerque, NM, United States (U.S. corporation)
PI US 5987470 19991116
AI US 1997-918519 19970821 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Amsbury, Wayne; Assistant Examiner: Terry, Mark
LREP Grafe, V. Gerald
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 9,6 Drawing Page(s)
LN.CNT 714
DETD . . . in the same industry, have the same credit rating, have similar stock performance, or transact with the same financial institutions. **Proteins** can be judged to be similar if they contain aligning amino acid sequences, or can be similar if they can. . .
CLM What is claimed is:

1. A method of mining data in a computer-readable **database** composed of a plurality of related items, wherein the relationship between each pair of related items comprises a scalar similarity. . .

5. A method of mining data in a computer-readable **database** composed of a plurality of related items, comprising: a) assigning coordinates to each item in an n-dimensional space, where n. . .

7. A method of mining data in a computer-readable **database** composed of a plurality of related items, comprising: a) assigning coordinates to each item in an n-dimensional space, where n. . .

8. A computer system for communicating a **database** composed of a plurality of related items, wherein the relationship between each pair of related items comprises a scalar similarity value, comprising: a) a storage subsystem; b) an output subsystem; c) a processing subsystem connected to access the **database** stored in the storage subsystem and connected to control the operation of the output subsystem; d) means for determining coordinates. . .

12. A computer system for communicating a **database** composed of a plurality of related items, comprising: a) a storage subsystem; b) an output subsystem; c) a processing subsystem connected to access the **database** stored in the storage subsystem and connected to control the operation of the output subsystem; d) means for assigning coordinates. . .

14. A computer system for communicating a **database** composed of a plurality of related items, comprising: a) a storage subsystem; b) an

output subsystem; c) a processing subsystem connected to access the **database** stored in the storage subsystem and connected to control the operation of the output subsystem; d) means for assigning coordinates. . .

15. A method of using a computer to facilitate **data mining** of a **database** composed of a plurality of related items, wherein the relationship between each pair of related items comprises a scalar similarity. . .